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How leader autonomy support and competitive factors relate to employees' motivation within retail.

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Abstract

The current study aimed to investigate what motivational effects Leader Autonomy Support (LAS), frequency of competitions and competitive climate have on employees within retail. A total of 350 stores were approached with an online survey, collecting answers from 64 retail employees ($N=64$). The hypotheses that LAS would have a significant association with intrinsic motivation was confirmed. Cooperative competitions were hypothesized to correlate positively with intrinsic motivation, but this hypothesis could not be confirmed. Neither was intrinsic or extrinsic motivation significantly related to competitive climate. Moreover, the correlation analysis and the multiple regression analysis revealed a positive association between intra-group competitions and intrinsic motivation. Thus, the combination of more frequent intra-group competitions and an autonomy supportive leader, is significantly associated with intrinsic motivation for retail employees. Conclusively, the study contributes to the body of knowledge on motivation relating to LAS, competitions and competitive climate, reaching its applicability to the retail environment.

Keywords: intrinsic motivation, extrinsic motivation, leader autonomy support, competitions, competitive climate, retail employees

EMPLOYEE MOTIVATION IN RETAIL

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Introduction

Intrinsic motivation, identified as the engagement in an activity because it is enjoyable, has been proven to be a critical aspect of work-life (Gagné & Deci, 2005; Ryan & Deci, 2000). Previous research has shown a connection between intrinsic motivation and important factors such as individual well-being (Baard, Deci & Ryan, 2004; Slemp, Kern, Patrick and Ryan, 2018), better performance (Ryan & Deci, 2000; Selvarajana, Singhb & Solanskyc, 2018), higher levels of engagement (Hardré & Reeve, 2009), lower turnover intentions (Jungin, 2018; Shareef & Atan, 2019), as well as higher productivity for the organization in a long term perspective (e.g., Williams, Halvari, Niemiec, Sørebo, Olafsen & Westbye, 2014; Wright, Cropanzano & Bonett, 2007). Performance is thought to increase along with intrinsic motivation since people tend to put more time and effort into something they enjoy, hence producing higher quality results with time (Tauer & Harackiewicz, 2004; Grandey, Goldberg & Pugh, 2011; Cerasoli, Nicklin & Ford, 2014). In other words, intrinsic motivation, is an important aspect in regards to work-life, both for the individual as well as for the organization.

Something that has received a considerable amount of attention and support in research in terms of increasing employees intrinsic motivation is *leader autonomy support* (LAS; Ryan & Deci, 1985; 2017). Building on self-determination theory, LAS is a leadership style that focuses on encouraging employees self-initiation and listening to the perspectives of employees, avoiding punishment and external rewards (Baard et al., 2004; Deci, Ryan, Gagné, Leone, Usunov & Kornazheva, 2001; Hardré & Reeve, 2009).

One particular branch of industry, where there seems to be a gap in motivational research is retail, since few studies have been carried out with focus on the retail environment in terms of extrinsic and intrinsic motivation. Anecdotal evidence suggests that extrinsic factors, such as competitions and rewards, are oftentimes used to motivate employees in the sales industry, including the retail industry. Examples of these factors may be a strong focus on best sales numbers for individual employees or sales competitions between colleagues. The purpose of this study is to investigate retail stores to see if this is the case, and if so, how it may be connected to the sales employees' level of intrinsic motivation. Furthermore, the researchers of the current study also intend to investigate how LAS relate to employees' intrinsic motivation within retail,

since this is absently to modestly investigated within this particular work-field. This study thereby aims to contribute to the body of knowledge on work-motivation through an examination of employees within retail.

Self-determination Theory

The current study will base its primary theoretical framework in Self-determination theory (SDT; Ryan & Deci, 2017). It is an empirically based meta-theory, that mainly focuses on human motivation and personality development. The theory defines intrinsic motivation as doing something because it is enjoyable or interesting. This form of motivation is purely internally regulated which means that no external incentives, similar to rewards or goals, are needed in order for a person to initiate and engage in an activity (Deci & Ryan, 1985; 2017; Gagné & Deci, 2005). If a behavior is not intrinsically motivated, that is exclusively internally regulated, it is said to be extrinsically motivated. Furthermore, SDT proposes that extrinsic motivation can vary in the degree to which it is autonomous versus controlled. In other words, extrinsic motivation can be more or less internally regulated. The theory identifies four types of extrinsic motivation and differentiates them along a continuum from controlled to autonomous motivation, ranging from more internalized to less internalized forms; *Integrated*, *identified*, *introjected* and *externally regulated* (Ryan & Deci, 2017).

The Four Regulations of Extrinsic Motivation. *Integrated regulation* is when an individual is assimilated with the values of the behavior, thinking and feeling “this is me”. For example: “I paint because I am a painter, this is who I am.” Integrated regulation is to a large part internally regulated. Next, there is *identified regulation*, which is semi internal and stands for an action that is motivated by the individual’s conscious goals and values. For example: “I recycle because I want to be a person who cares about the environment.” The third and last level that still is somewhat internally regulated is *introjected regulation*, where a behavior is regulated by a sense of contingent self-esteem. For example, “I do this activity in order to feel good about myself.” This type of regulation can also serve as a motivational force to avoid feeling guilty about *not* doing something. After these three levels comes *external regulation*, that is exclusively controlled by external rewards and/or punishments. Lastly, SDT presents *non-regulation*, that is when a person simply lacks intention or motivation (Ryan & Deci, 2017).

Need Satisfaction. SDT focuses on the fulfillment of three basic psychological needs, termed *need satisfaction*, namely the need for *competence, relatedness and autonomy*. The need for *competence* refers to the need to feel efficiency and mastery within important life contexts. *Relatedness* concerns the feeling of belonging in social groups. Both caring for others and knowing that others care for you are important factors in order to feel socially connected. Lastly, *autonomy* is defined as acting intentional and according to one's volition. When acting with autonomy, the behavior is self-endorsed and congruent to the individual's interests and values (Ryan & Deci, 2017). The satisfaction of these three needs has been shown to facilitate intrinsic motivation as well as internalization and integration of extrinsic motivation (Ryan & Deci, 2017). A substantial amount of research has been conducted on this relationship and found support for its applicability in practice (e.g., Baard et al., 2004; Deci et al., 2001; Gagné & Deci, 2005; Jungert, Van den Broeck, Schreurs & Osterman, 2018; Ryan & Deci, 2000; 2017).

Cognitive Evaluation Theory

As previously mentioned, SDT is a meta-theory, and one of its mini-theories is Cognitive Evaluation theory (CET; Ryan & Deci, 1985; 2017). CET focuses on intrinsic motivation and aims to explain how intrinsic motivation can be increased: by events that promote a person's experience of competence and autonomy, or decreased: by events that diminish a person's experience of competence and autonomy. The theory argues that it is crucial to satisfy both autonomy and competence in order to sustain intrinsic motivation. On the other side of the spectrum from autonomy, a concept that contrasts autonomy, is control. In the workplace, control can be exercised in a number of ways: by means of incentives (rewards), punishments and/or a general environment that limits choices and individual expression (Ryan & Deci, 1985; 2017).

Leader Autonomy Support and Work Motivation

According to Yukl (2010), most behavioral scientists and practitioners seem to agree that leadership is important to consider when evaluating organizational effectiveness. A leadership style associated with SDT is *Leader Autonomy Support (LAS)*. LAS is characterized by acknowledging the perspectives of employees, offering opportunity for choice and input, encouraging self-initiation, as well as avoiding punishment and external rewards to promote certain behavior (Baard et al., 2004; Deci et al., 2001). The characteristics of LAS has been

found to positively correlate with, for example, well-being and work engagement (Deci et al., 2001; Schultz, Ryan, Niemiec, Legate & Williams, 2015; Williams, Halvari, Niemiec, Sørenbø, Olafsen & Westbye, 2014). The positive effects of autonomy supportive leadership has since been further reinforced by the researchers Slemp, Kern, Patrick and Ryan (2018). Their meta-analysis included 72 studies with 83 unique samples with a total of 32 870 participants. They concluded that LAS was positively and strongly correlated with all three aspects of SDT (i.e., autonomy, competence and relatedness). Furthermore, they found that LAS was positively and progressively more strongly correlated with more internalized forms of motivation, for example integration. Finally the results from the analysis showed moderate to strong associations between LAS and employee well-being and positive work outcomes as well as negative associations between LAS and undesired job behaviors. Moreover, Hardré and Reeve (2009) conducted a field experiment including 25 managers from a Fortune 500 company, who received training in autonomy support. Employees were found to be significantly more intrinsically motivated and having greater workplace engagement, relative to the control group that did not receive any training.

In summary, there is a substantial amount of research that supports the notion that employees' intrinsic motivation, and even performance, is positively related to the degree of leader autonomy support they receive. Subsequently, the first hypothesis of the current study is formed, concerning employees within retail:

H1. Leader autonomy support is positively associated with intrinsic motivation.

Motivational Effects of Rewards

Ryan, Mims and Koestner (1983) investigated what effect rewards had on motivation. They reviewed the present literature, at the time, on contingent reward and intrinsic motivation. They found that in many cases, different concepts were called the same thing and the same concept was called different things. In regard to this, they established some key definitions. First, they defined what they called *non-task-contingent reward* as “expected rewards that are given to people for participating in an experimental session, independent of what they do in that

session.” (Ryan, Mims & Koestner, 1983, p. 736). Secondly, they specified the term *task-contingent reward* as: “a reward is given for doing a task: For example, a person is paid a set amount for each puzzle solved or each model assembled.” (Ryan, Mims & Koestner, 1983, p. 737). Third, *performance-contingent reward*: “a reward that is given for a specified level of performance, that is, for meeting a set criterion, norm, or level of competence.” (Ryan, Mims & Koestner, 1983, p. 737). Lastly, and more to the point of the current study, they found some studies using the term *contingency* in reference to situations where two or more people compete for a reward in a zero-sum state of affair, making the reward a form of performance contingency. However, since the competition, according to the authors, introduces additional things to consider, they came up with the term *competitively contingent reward*, defining it as: “situations in which people compete directly with others for a limited number of rewards that are fewer than the number of competitors.” (Ryan, Mims & Koestner, 1983, p. 737). These definitions are still used in present times by researchers on the subject (Gagné & Deci, 2017).

Based on the results of what Ryan, et al. (1983) found in the literature (e.g., Dollinger & Thelen, 1978; McLoyd, 1979; Cooper & Smith, 1977; Smith & Pittman, 1978; Ross, 1975), they concluded that non-contingent rewards tend to not decrease intrinsic motivation relative to no reward; task-contingent rewards to generally decrease intrinsic motivation relative to no reward; the performance-contingent rewards showed mixed results in the literature, seemingly depending on the type of associated feedback given; and competitively contingent rewards decreasing intrinsic motivation relative to no reward. Ryan et al. (1983) also found some inconsistent results, which they hypothesized, was due to different aspects of the external events: reward and communication. They proposed the two different aspects affecting the results were the *informational* aspect, meaning feedback/rewards that signifies that the person is competent or reveals how to become more competent at the activity, and the *controlling* aspect, meaning feedback/reward that pressure people to do things in a particular way, time or place to receive the reward or positive feedback. If meaningful feedback is given in an informational setting, relating to their competence, intrinsic motivation has been shown to increase. However, if the feedback is given in a controlling manner, the intrinsic motivation has been demonstrated to decrease. The

same has been applied in research on rewards, where if a reward is experienced as a means to control certain aspects of one's behavior, the intrinsic motivation decreases.

Furthermore, Ryan, Mims and Koestner (1983) conducted an experiment of their own, with the purpose of clarifying some previous inconsistencies due to terminological differences. These experiments resulted in a number of interesting findings that clarified some previous inconsistencies. First they investigated performance-contingent reward relative to no reward with comparative feedback. Based on this experiment they concluded that performance-contingent reward decreased intrinsic motivation compared to no reward. Furthermore, when comparing all the reward groups (informational feedback-, controlling feedback- and no feedback-group) with all the no-reward groups (same feedback division), they found that the reward groups had significantly less intrinsic motivation when feedback was held constant between the groups. Secondly, they compared *controllingly* administered feedback and controllingly administered performance-contingent rewards to informationally administered feedback and informationally administered performance-contingent reward. The results gave support for the notion that controllingly administered feedback and rewards significantly decreases intrinsic motivation compared to informationally administered feedback and rewards.

The Undermining Effect. The research presented above preceded CET, which paid attention to the detrimental effects that external rewards can have on intrinsic motivation. That is, when a reward is given to a person for practicing an activity, the person's task enjoyment is likely to decrease. CET termed this *The Undermining Effect* (Ryan & Deci, 1985; 2017). A substantial amount of empirical evidence has since pointed to the consistency of the undermining effect (e.g., Deci, Koestner and Ryan, 1999; Deci et al., 2001). However, Deci and his colleagues (1999) presented some limiting conditions to the effect, drawing from the results of a meta study they conducted: If a reward is given to a person and this person did not expect it, the reward did not undermine intrinsic motivation. Likewise, if a reward is given independently of the task, for example wage, intrinsic motivation remains intact.

The researchers behind SDT (Ryan & Deci, 1985; 2017) explain the undermining effect by theorizing that the pure joy or interest of practicing an activity is reduced when an individual is given an external incentive, due to the fact that the reward will be experienced as something

controlling, which will in contrast to feeling a sense of autonomy will undermine intrinsic motivation. Similarly, some empirical evidence suggests competitions may also be one of these controlling factors, with similar effects on intrinsic motivation (Gagné & Deci, 2005).

Furthermore, the researchers Gagné and Deci (2005) explain the fact that informational feedback does not impact intrinsic motivation in a negative way by saying that it promotes the need for *competence*. Thus, if feedback is given in an informational and supportive way, it will not undermine intrinsic motivation and could sometimes even enhance it, due to the fact that it promotes competence which is one of the other vital needs, similar to autonomy (Gagné & Deci, 2005; Ryan & Deci, 2017).

The undermining effect has, however, received some criticism. Research shows that rewards may increase intrinsic motivation, depending on the type of performance. A study by Eisenberger, Rhoades and Cameron (1999) revealed a positive correlation between intrinsic motivation and reward when reward was given for higher performance. This effect was in part explained by how high performance rewards magnifies people's sense of achievement, more specifically competence, which is one of the needs of satisfaction according to SDT. They also claim that people understand that the reward giver lacks control over the performance of the reward receiver and that participating in competition is largely attributed to one self. Some rewards are therefore advantageous to self-determination, rather than detrimental (Eisenberger, Rhoades and Cameron, 1999).

The inconsistencies between CET and the research by Eisenberger, et al. (1999) was later investigated by Houliort, Koestner, Joussemet, Nantel-Vivier and Leke (2002). They tested two different aspects of autonomy: *affective autonomy*, a feeling of absence of pressure and tension, and *decisional autonomy*, a feeling of choice. Results showed that performance-contingent reward had a significant detrimental effect on affective autonomy, but did not significantly affect decisional autonomy. Moreover, performance contingent reward had a positive relationship with feelings of competence. According to Houliort, et al. (2002), this higher resolution view of autonomy helps understand the different results yielded in previous research.

The research above is an overview of what effect rewards have on intrinsic motivation. This is important to understand when moving forward with the research on competitions and

intrinsic motivation, since rewards and competitions are in some ways related. For example, performance-contingent rewards have, according to Ryan, Mims and Koestner (1983), many shared characteristics with what they call competitively contingent rewards.

Motivational Effects of Competitions

As part of the research that preceded SDT, early research on competition, conducted by Deci, Betley, Kahle, Abrams and Porac (1981), has shown results pointing to competition decreasing intrinsic motivation. They found negative associations between both winning and losing competitions and intrinsic motivation. They argue this is because competing is extrinsic in nature and therefore could still motivate an individual but on an extrinsic level, not intrinsic.

Continuing the research on competition and motivation, Deci and Reeve (1996) found in their study that in a *competitive* setting, intrinsic motivation is affected by (a) positive outcome (winning or losing) and (b) interpersonal context (pressured versus non-pressured). Winning a competition increased people's sense of competence and was therefore related to higher levels of intrinsic motivation, but only in a non-controlling context. High pressure to win diminished self-determination and decreased intrinsic motivation. They also found that individual competence valuation, the emotional involvement in attaining competence, was positively related to competence, self-determination and intrinsic motivation. They note that the negative correlation between winning and intrinsic motivation found in Deci, et al (1981) may have been due to pressuring aspects to win. The notion that intrinsic motivation is more positively affected when individuals compete do demonstrate competence is also supported by the integrative analysis conducted by Vallerand and Losier (1999). They also suggest that intrinsic motivation may be enhanced when engagement in competitions is made by choice.

Further, building on SDT, Vansteenkiste and Deci (2003) compared the intrinsic motivation of people who competed and won and people who competed and lost with a control group that did not compete and received no feedback and no reward. They found no difference between the winners and the control group in their level of intrinsic motivation. Moreover, the losers of the competition reported significantly lower intrinsic motivation. However, they also investigated how positive feedback would affect the participants that lost and found that the

feedback counteracted the negative effects of losing. These results are in line with what Vallerand & Losier (1999) found as well.

Standage, Duda and Pensgaard (2005) also show that need satisfaction, and in turn subjective well-being, is affected by how the competitions are administered and how participants are evaluated. If the competition has an ego-involving structure, where the participants are evaluated and recognized based on winning a competition and on their superiority over others, losing may cause lower levels of well-being. However, if the competition has a task-involving structure, where participants are recognized and rewarded for their ability to improve and master a skill, and participants are cooperating with another person, the negative effects of losing was counteracted.

Furthermore, Tauer and Harackiewicz (2004) conducted several studies on people playing basketball with the manipulation of having the participants either merely cooperating with others, competing individually against others, or both cooperating and competing, in other words: playing in a team, against another team. They found that the level of intrinsic motivation is increased significantly by the combination of cooperation and competition, compared to pure cooperation or pure competition (Tauer & Harackiewicz, 2004). More support for the association between intrinsic motivation and cooperation is found in research conducted by Zhu, Gardner and Chen (2018) where a collaborative climate was positively related to intrinsic motivation.

More recent research suggests that competitions may have a positive effect on intrinsic motivation. Eisenberg and Thompson (2011), conducted an experiment on musicians, investigating the effect of competition on intrinsic motivation and creativity. They found that people involved in competitions were more creative and reported higher levels of intrinsic motivation than the control group that performed the same task without competing against others (Eisenberg & Thompson (2011).

Conclusively, the relation between competitions and intrinsic motivation seems to be dependent on numerous contextual factors. Early research suggested that competitions may be controlling and limit people's sense of autonomy, thereby decreasing intrinsic motivation. Nonetheless, competitions may increase extrinsic motivation since they are considered extrinsic by nature (Deci & Ryan, 1981). Conversely, more recent studies suggest competitions may

increase intrinsic motivation as well due to the need of competence being satisfied, depending on the structure of the competition (Deci & Reeve, 1996; Standage, et al., 2005; Vallerand & Losier, 1999) and the feedback available (Vansteenkiste and Deci, 2003; Vallerand & Losier, 1999). Recent research further suggests that in some settings, competitions have a positive effect on intrinsic motivation overall, when other variables are held constant (Eisenberg & Thompson, 2011). The positive effects of cooperation, when competing in teams, could also positively affect intrinsic motivation and subjective well-being (Standage, et al., 2005; Tauer & Harackiewicz, 2004; Zhu, et al., 2018). Based on this, the following hypothesis is examined:

H2. Higher frequency of retail cooperative competitions will be positively associated with intrinsic motivation.

Different from cooperative competitions is what can be called *intra-group competitions*, where members of the same team (i.e., employees in the same store) compete against each other. Since the contextual aspects of the competitions in retail is largely unknown, the following research question is formed:

How is retail employees' extrinsic and intrinsic motivation associated with the frequency of intra-group competitions?

Motivational Effects of Competitive Climate

Beyond looking at the frequency of competitions per se, one additional factor that may contribute to understanding how intrinsic motivation is affected by competition is how people perceive the *competitive climate*. This is something that is only modestly investigated in terms of work climate and perceived competitive colleagues, within retail. However, some research has been conducted on competitive climate in relation to competitions that can give an indication of how a perceived competitive work climate is related to motivation.

Zhu, et al. (2018) defines a competitive climate as a situation where team members are trying to outperform each other to obtain extrinsic rewards. A part of their research aimed to

investigate the relation between a competitive climate and intrinsic motivation. Beyond investigating collaboration, they also hypothesized that a competitive climate would correlate positively with intrinsic motivation. However, they could not give support for this hypothesis. A reason for this, as they suggest, may have been because of the cultural factor, since Taiwan is a collectivistic society. They proposed that other results may be revealed if tried in other, more individualistic and masculine societies (Zhu, et al., 2018).

Conversely, when examining the extrinsic motivational effect of competitive climate, they found support for the notion that a competitive climate has a favorable effect on extrinsic motivation. In the current study, the perceived competitive climate is defined as how employees experience the competitive work climate related to their colleagues. Based on results from the research on competitive climate and competitions, the following hypothesis is examined:

H3. Higher levels of extrinsic motivation will be positively associated with the perceived competitive climate.

Arnold, Flaherty, Voss and Mowen (2009) further suggested some positive effects competitive climate might have on employees within retail. They explained that role ambiguity can be a stressor for employees in a retail environment and that an internal competitive climate can work as a “buffer”: encouraging and facilitating the employees to seek help when confronted with ambiguity, and thereby help them to decrease the role ambiguity along with role stress. They define a competitive work climate as when employees perceive that rewards are given, contingent upon the comparisons of their performance against their colleagues’. Their result showed that the reduction of role ambiguity created by having an internal competitive climate will lead to a boost in perceived self-efficacy, leading to better job satisfaction and in turn better performance. Arnold and his colleagues therefore argue that a competitive climate should be promoted by the managers if role ambiguity is exogenously determined (Arnold, et al., 2009).

Research on perceived competitive climate has limiting reach regarding its effect on intrinsic motivation. Most research on the subject has been conducted with a focus on competitions, while the current study aims to investigate the perceived competitive work climate

among colleagues, stretching outside competitive settings as well. Some results point to a non-relationship between a competitive climate and intrinsic motivation, though the results may not be transferable to more individualistic cultures (Zhu, et al., 2018). Other studies have pointed out positive psychological effects of having a competitive climate (Arnold, et al., 2009). The current study is interested in inquiring how the perceived competitive climate relates to intrinsic motivation within a retail environment. In light of this, the following research question is presented:

How is retail employees' intrinsic motivation associated with the perceived competitive climate?

Purpose

Previous research has shown some interesting associations between LAS, competitions and competitive climate and motivation. The motivational effect of competitions have been shown to be dependent on multiple contextual factors. How these factors are manifested in a sales setting, specifically in retail, remains more or less an empirical question. Thus, the purpose of this study is to investigate how the aforementioned variables relate to retail employee's levels of extrinsic and intrinsic work motivation, in retail stores.

Methodology

Participants

The target population of this study was retail employees. Initially, the sample contained 74 participants. However, before the analysis, ten affirmed store managers were excluded from the sample since the sample of choice was retail employees and not store managers. The motive behind this choice was because retail managers are likely to have influence over the frequency of competitions in the store, as well as the fact that it is not certain that they participate in the competitions. The remaining sample of 64 participants consisted of 51 women (79.7%), and 13 men (20.3%). Ages ranged from 19 to 59 years old with a mean age of 28.86 years (SD=8.59). Their tenure for working within retail was between 1 to 35 years with a mean of 6.66 years (SD=6.49).

Instrument

A standardized test was used for measuring motivation, namely the *The Motivation at work scale* (MAWS) (Gagné, et al., 2012). The questions were implicitly divided into the different motivation levels targeting *externally regulated motivation* (questions: 1-6) ($\alpha=.77$), for example, “To get others approval (e.g., supervisor, colleagues, family, clients...)”, *introjected* (questions: 7-10) ($\alpha=.71$), for example, “Because it makes me feel proud of myself.”, *identification* (questions: 11-13) ($\alpha=.85$), for example, “Because putting efforts in this job has personal significance to me.” and *intrinsic motivation* (questions: 14-16) ($\alpha = .89$), for example, “Because I have fun doing my job.”. The questions concerning *amotivation* were removed due to the fact that this was not of interest for the current study.

LAS was measured using a validated questionnaire containing a combination of the *Perceived Autonomy Support Scale for employees* (Moreau & Mageau, 2012) and the *Support for autonomy from managers* (Jungert, Koestner, Houliort, & Schattke, 2013). The index contained seven questions measuring how the participants experienced their manager ($\alpha=.87$) for example, “My manager let me make my own decisions, when possible.”

The items concerning *competition* were created by the researchers of the current study. Competitional frequency was divided into questions about the frequency of cooperative and intra-group competition. The item for perceived *competitive climate* was operationalized as (a) how they perceived the rivalry between themselves and their colleagues, as well as (b) how much focus was put on who has the best sales numbers. Since there were only two items, the inter-reliability was measured using Spearman-Brown (.76) (Eisinga, Grotenhuis & Pelzer, 2013). One question was asked about their *experienced winning frequency* in intra-group competitions. This was asked in order to check for the potential mediating factor of winning competitions.

Other explorative questions were also asked in the questionnaire out of curiosity and possibly paving the way for future research. However, these questions were not kept in the analysis since they were not relevant for the current study.

The survey contained items that ranged from 1-7 on a Likert scale, with a verbal description for every step, in order to ensure consistency in how the participants apprehended the

scale. This applied for all questions except for the ones about demography where the participants instead could report exact numbers. In sum, the survey contained 34 questions and the duration for completing the survey was about five minutes. *Google forms* was used as a platform for creating the survey. Subsequently, a QR-code was created for the google form web address, enabling easy distribution for the online survey. The survey could thereby be handed out to the participants on a piece of paper that could be kept in the store, allowing exposure to even more employees in the same store, later on. Furthermore, the entire survey was in Swedish, using the pre-translated versions of the validated questionnaires, and it was open for 4 weeks.

Procedure

The survey was distributed to a wide range of different types of stores, including, but not limited to, sale of kitchen tools, clothing and mobile phones. A QR-code with a link to the survey was printed out and handed over to the sales personnel that was available, as well as a short verbal introduction of ourselves and the project. After receiving the QR-code and accepting participation, the store employees were offered a piece of wrapped candy, as a way for the researchers to show gratitude and to possibly to create some reciprocity, creating the most favorable prerequisites for gathering as many participants as possible. The stores were located in Malmö and in Lund. Altogether, 350 different stores were approached and left with the QR-code. This method of distribution was chosen in order to receive answers from employees working at a variety of different companies and thereby decrease the risk of the answers being biased by company culture. Initially, the survey was meant to be distributed to a higher number of participants, but due to societal implications and health risks created by the pandemic COVID-19, this was not possible and the authors had to stop the distribution after four weeks. However, according to one rule of thumb stating the total number of participants should equal the number of predictor variables plus 50 (Wilson VanVoorhis & Morgan, 2007), 64 participants was considered a sufficient sample.

Ethics

The current study did not contain any mentally or emotionally straining questions and did not collect any sensitive information about the participants. Therefore, it did not need to be approved by the Swedish Ethical Review Authority. It was however approved by the local Ethics

Committee at Lund University's department of psychology. Before answering the survey, the participants were obligated to read a text that clarified that they were going to be entirely anonymous and that they could choose to abort the participation at any time during the survey.

Data analysis

Screening. The data was checked for outliers using Mahalanobis distance which indicated no sign of outliers in the sample ($df=5$, $cut-off=.001$). No covariates violated the multicollinearity assumption ($Tolerance>.10$, $VIF<10$) (Pallant, 2010).

No errors or missing values were found in the data sample. All indexes and competition variables were ideally to acceptably normally distributed with skewness $<\pm 1.96$ and kurtosis $<\pm 1.96$ (George & Mallery, 2010).

Results

Table 1 presents the means and standard deviations for each of variables and Table 2 presents the inter-item correlations.

Table 1: Descriptives.

	M	SD
1. LAS index	5.08	1.44
2. Intrinsic motivation index	4.40	1.44
3. Identified index	4.69	1.49
4. Introjected index	4.37	1.18
5. External regulation index	4.09	1.17
6. Extrinsic motivation index	4.31	.98
7. Cooperative competitions	4.02	1.77
8. Intra-group competitions	3.89	1.68
9. Competitive climate	3.05	1.87

10. Winning frequency

4.03

1.44

Gender, age and tenure did not correlate significantly with intrinsic or extrinsic motivation ($p > .05$). As hypothesized, intrinsic motivation positively and significantly correlated with LAS ($p = .048$). Higher frequency of intra-group competitions also had a positive and significant correlation with intrinsic motivation ($p = .002$). Intrinsic motivation did not, however, correlate significantly with higher frequency of cooperative competitions ($p = .464$) or competitive climate ($p = .816$). Extrinsic motivation did not correlate with any of the dependent variables ($p > .05$). However, when isolating identification, it had a significant and positive correlation with cooperative competitions ($p = .047$).

The controlling variable of experienced winning frequency did not correlate with intrinsic motivation ($p = .288$) or extrinsic motivation ($p = .414$).

Table 2: Inter-item correlations.

	1	2	3	4	5	6	7	8	9	10
1. LAS	-									
2. Intrinsic motivation	.249*	-								
3. Identification	.279*	.582**	-							
4. Introjection	.185	.356**	.594**	-						
5. External regulation	-.115	-.070	.309*	.394**	-					
6. Extrinsic motivation	.103	.297	.741**	.796**	.807**	-				
7. Cooperative competitions	.125	.093	.250*	.033	.152	.184	-			

8. Intra-group competitions	-.073	.386**	.215	.200	-.114	.086	.310*	-
9. Competitive climate	-.328*	-.030	-.111	.074	-.001	-.012	.045	.342**
10. Winning frequency	-.072	.135	.067	.176	.028	.104	.069	.396**

* $p < .05$. ** $p < .01$.

A multiple linear regression model was made to predict intrinsic motivation (M1), based on the predictors: LAS, intra-group competitions, cooperative competitions, competitive climate, winning frequency. The variables statistically significantly predicted the outcome variable, ($F(5, 58) = 3.641$, $p = .006$, $R^2 = .239$, $R^2_{Adjusted} = .173$). The two variables LAS and intra-group competitions added statistically significantly to the prediction ($B = .259$, $p = .039$, $B = .392$, $p = .001$ respectively).

Another multiple regression model was created to predict extrinsic motivation (M2), based on the same predictors as in M1. The variables did not statistically predict the outcome variable, ($F(5, 58) = .621$, $p = .685$, $R^2 = .051$, $R^2_{Adjusted} = -.031$).

Table 3: Multiple regression analysis of extrinsic and intrinsic motivation.

	M1 ^a			M2 ^b		
	B	t	Sig.	B	t	Sig.
Intercept	1.999	2.234	.029	3.412	5.010	.000
LAS	.259*	2.111	.039	.054	.580	.564
Intra-group competitions	.392**	3.394	.001	.006	.071	.943
Cooperative competitions	-.063	-.637	.527	.091	1.208	.232
Competitive climate	-.079	-.771	.444	-.017	-.225	.823

Winning frequency .012 .094 .925 .072 .734 .466

a. Dependent variable=Intrinsic Motivation. b. Dependent variable=Extrinsic Motivation. * $p < .05$. ** $p < .01$.

Since the model for extrinsic motivation was not significant, three additional models were created (M3, M4 & M5) in order to investigate the potential for a better model using each of the motivation types separately as the outcome variable. However, similar to extrinsic motivation, the three models were non-significant ($p = .054$, $p = .287$, $p = .387$ respectively). Results are presented in Table 4.

Table 4: Multiple regression analysis of Identified, Introjected and Externally Regulated motivation.

	M3 ^c			M4 ^d			M5 ^e		
	B	t	Sig.	B	t	Sig.	B	t	Sig.
Intercept	2.359	2.439	.018	2.621	3.279	.002	4.466	5.578	.000
LAS	.245	1.845	.070	.190	1.734	.088	-.132	-1.200	.235
Intra-group competitions	.189	1.513	.136	.122	1.181	.243	-.162	-1.567	.122
Cooperative competitions	.132	1.229	.224	-.040	-.448	.656	.158	1.782	.080
Competitive climate	-.098	-.893	.375	.035	.388	.699	-.012	-.134	.894
Winning frequency	.032	.227	.822	.089	.774	.442	.081	.700	.487

c. Dependent variable=Identified Motivation. d. Dependent variable=Introjected Motivation. e. Dependent variable=Externally Regulated Motivation. * $p < .05$. ** $p < .01$.

Discussion

Findings on Autonomy Support and Motivation

The association between LAS and intrinsic work motivation was significant and positive. Further, LAS contributed significantly to the multiple regression model associated with intrinsic

motivation, giving support for H1. This study thereby contributes to the research on LAS (Baard et al., 2004) and research on autonomy and motivation according to SDT (Ryan & Deci, 1985; 2017), confirming that employees with higher levels of autonomy support from their leader have significantly higher levels of intrinsic motivation, stretching its applicability to the retail environment.

Findings on Competitional Frequency and Motivation

According to H2, it was hypothesized that higher frequency of cooperative competitions correlates positively with intrinsic motivation. However, the correlation analysis revealed a non-significant relationship between the frequency of cooperative competitions and intrinsic motivation. Moreover, factoring in other variables in the multiple regression analysis, cooperative competitions had a small non-significant negative relationship with intrinsic motivation. The hypothesis could therefore not be confirmed.

These results are somewhat inconsistent with previous research, since competing in teams (i.e. competition and cooperation combined) has been positively associated with intrinsic motivation (Standage, et al., 2005; Tauer & Harackiewicz, 2004; Zhu, et al., 2018). Factors in the current study that may have influenced these results could be that retail is overrepresented by highly competitive people that are more motivated by intra-group competitions than cooperation. The way that the competitions are administered could also affect the non-significant correlation. Similar to what Standage, Duda and Pensgaard (2005) suggests, if the competitions are administered in a way that focuses on reward instead of developing and mastering a skill, intrinsic motivation may suffer. The retail environment, or at the very least the current sample, could be an example of having controllingly administered cooperative competitions, which could explain why employees' intrinsic motivation does not have a positive correlation with cooperative competitions. The inconsistent results may also be caused by a Type II error, in other words a false negative, due to a smaller sample size.

Nonetheless, interestingly to note is the significant and positive relationship between the frequency of cooperative competitions and *identification*. This indicates that cooperative competitions are related to motivation in terms of personal priorities and values in completing the tasks, and not to task enjoyment of the activity per se.

Conversely, the correlation analysis between intra-group competitions and intrinsic motivation revealed a highly significant and positive correlation. Furthermore, the intra-group competitions variable added significance to the multiple regression model in predicting intrinsic motivation. This indicates that a higher frequency of intra-group competitions in the retail environment relates to higher levels of intrinsic motivation experienced by retail employees.

Even though some research has suggested that intra-group competitions do not lead to higher levels of intrinsic motivation (Tauer and Harackiewicz, 2004), more recent studies have found that intra-group competitions have a positive relationship to intrinsic motivation (Eisenberg and Thompson, 2011). These results are consistent with what recent research on competitions and intrinsic motivation has found. A plausible explanation for these results, in reference to what previously has been found, may be that competitions have a positive effect on competence, and in some cases, the satisfaction of autonomy. Since research also points to the variety of contextual factors that influence the motivational effect of competitions, such as competitions administered with focus on winning or developing competence (Standage, et al., 2005; Vallerand & Losier, 1999), feedback (Vallerand & Losier, 1999; Vansteenkiste & Deci, 2003) and individual competence validation (Deci & Reeve, 1996), it may be assumed that these contexts criteria are to some degree met within the retail environment.

In addition, extrinsic motivation did not relate to either cooperative or intra-group competitions. The results showed no correlation, with the exception of identification, having a significant positive relationship to cooperative competitions, when isolated as a variable of its own. Moreover, the competitive variables did not contribute significantly to the multiple regression model predicting extrinsic motivation.

This indicates that employees within retail are more intrinsically motivated by competitions, specifically intra-group competitions, than extrinsically. Since winning was not significantly related to either one of the motivational types, it may be assumed that the competitions are administered in a way that focuses on developing a skill rather than pressure to win. This could explain why there was no significant connection between extrinsic motivation and competitions, speculating that competitions are means of enjoyment more than it is a means of receiving rewards. (More on this under future research).

Findings on Competitive Climate and Motivation

No correlation was found between competitive climate and extrinsic and intrinsic motivation respectively. In addition, the competitive climate was not significantly associated with intrinsic or extrinsic motivation in the multiple regression models. As previously mentioned, Arnold, et al. (2009) claimed that a competitive climate will have the positive effects of decreasing role stress and boosting perceived self-efficacy, leading to better job satisfaction and in turn better performance, if role ambiguity is present. Even though their study did not measure intrinsic motivation per se, one could compare the need for competence (as one of the pillars of intrinsic motivation) and a boost in self-efficacy, which makes the current study somewhat comparable to the one conducted by Arnold et al. (2009). With that said, this may indicate that role ambiguity was not an immediate issue in the current sample, or that the competitive climate simply did not have the same positive effects in this scenario as it had in the one by the study conducted by Arnold et al. (2009).

The current results are to some extent similar to the research conducted by Zhu, et al. (2018) where competitive climate had a non-significant relationship with intrinsic motivation. However, inconsistent with what they found, results show a non-significant relationship with extrinsic motivation as well. This may be the result of a limiting operationalization of the construct, since only two items were used. As Eisinga, et al. (2013) argues, more items than two is recommended in order to sufficiently represent the construct. It may likewise, as mentioned above, be a consequence of a small sample size. Alternatively, since the results on competitiveness were, to some degree, also inconsistent with previous research, it may prove to be caused by differences in the general population of retail. However, more research on the subject has to be made in order to make that inference. Moreover, the current study was conducted in a culture, arguably more individualistic than the culture in Taiwan (Zhu, et al., 2018). Further, it deployed a different design, targeted retail employees as well as having other differentiating factors that limits the comparison. Nonetheless, neither the study conducted by Zhu et al. (2018) nor the current study found support for the positive association between a competitive climate and intrinsic motivation, which may indicate that the two factors are not related.

Implications

The results derived from this study may be interesting for human resource departments within retail, hopefully shining a light on some important factors that could give some understanding about what motivates sales employees. Administrating intra-group competitions as well as making sure that the leadership is autonomy supportive seems to be two effective ways of increasing the employees' levels of intrinsic motivation. Store managers and leaders who want to promote well-being, productivity and engagement in their employees, may want to take advantage of these results, since these factors are previously linked to intrinsic motivation (Baard, Deci & Ryan, 2004; Slemp, Kern, Patrick and Ryan, 2018; Ryan & Deci, 2000; Selvarajana, Singhb & Solanskyc, 2018; Hardré & Reeve, 2009; Williams, Halvari, Niemiec, Sørebo, Olafsen & Westbye, 2014).

Limitations and Future Research

The small sample size of this study might limit its representability for the population, since it only collected answers from 64 participants, due to the limitations created by COVID-19. Future studies may benefit from having a greater sample size in order to possibly achieve higher external reliability. A larger sample size could also increase the statistical power and potentially find the hypothesized effect on cooperative competitions and intrinsic motivation, if the effect size is smaller than what the current sample could reveal.

Moreover, the concept of competitive climate was only measured using two items. This may have led to differences in participants' interpretation of the construct, possibly creating a confounder. According to Eisinga, Grotenhuis and Pelzer (2013), more items lead to better construct representation and should preferably be more than two. Additionally, the concept *rivalry*, being one of the questions on competitive climate, was not operationalized in the survey. This may have caused the participants to interpret the concept differently. Furthermore, since the question about experienced rivalry was placed following the questions about competitions, it is possible that the participants were biased to thinking about rivalry in a competition context, rather than in a more general work climate context.

In future research, it would be interesting to ask further questions about the conditions around the competitions, for example if they are autonomy supportive or not (SDT; Ryan &

Deci, 1985; 2017), or how high the pressure is to win (Deci & Reeve, 1996; Vallerand & Losier, 1999), as well as if there is any feedback involved (Vallerand & Losier, 1999; Vansteenkiste & Deci, 2003), in order to achieve a more detailed view on what kind of circumstances, around the competitions, are the most beneficial ones for increasing extrinsic and intrinsic motivation for employees within retail.

Future research on this subject may also benefit from testing the potential mediating effect of personal competitive orientation. Previous studies suggest that personal orientation plays a role in whether an individual enjoys competitions or not (Deci & Reeve, 1996). People who are competitive, also described as those High in Achievement Motivation (HAM), have a more favorable experience and will approach competitions with more eagerness, compared to people who are less competitive: Low in Achievement Motivation (LAM). Studies show that HAMs will most likely enjoy a task more if it is a competition when compared to LAMs, independent of whether they win or lose (Song, Kim, Tenzek & Lee, 2013; Tauer & Harackiewicz, 1999). Considering the fact that the item *winning* did not have an effect on employees' intrinsic motivation in the current study, this could be an indicator that HAMs are overrepresented in the retail environment. It would therefore be interesting to measure the distribution of HAMs and LAMs in the retail environment compared to a control group from the general population, to see if there is a significant difference. If that is the case, it could potentially explain the positive relationship on intra-group competitions and intrinsic motivation, found in the current study. Moreover, further research on comparing the effect of competitions on HAMs and LAMs within the retail environment could develop a deeper understanding, for HR departments and store managers, to help recruiting people who are the most suitable retail employees. Research on personal competitive orientation would then possibly add a new dimension of understanding in what way employees should be motivated in order to enjoy their work more and perform better. A future research question could be: "Do HAMs perform better and have higher intrinsic motivation as sales employees, compared to the average person and LAMs?" Since the sales industry in general can be a competitive environment, we might further speculate that HAMs would tend to stay longer, while LAMs would end their employment

sooner. Do highly competitive people stay as sales employees for a longer time compared to the average person and LAMs?

Another expansion of the current study could be to measure performance in relation to extrinsic and intrinsic motivation, for employees in retail. Previous research has suggested that higher levels of intrinsic motivation relates to higher quality results (Tauer & Harackiewicz, 2004). It would be interesting to investigate how employees' general output is affected by their extrinsic and intrinsic motivation, and if so, how: in a qualitative or a quantitative way?

What further could be done on the subject is studies with different methodologies, for example an experiment, in order to determine causality. It would be interesting to see what other unexplored variable(s), influences both intrinsic motivation and intra-group competitions. An example of this could be that store managers who administer more intra-group competitions also are more invested in their work, which could generate more intrinsically motivated employees.

Conclusion

Previous to this study, only anecdotal evidence suggested competitions were a common practice within retail. The current study suggests that this is true, both in terms of intra-group competitions and cooperative competitions. Results continue to show that intra-group competitions have a strong positive relationship with retail employees' level of intrinsic motivation. The results also suggest that retail employees are more intrinsically motivated when competing *against* their close colleagues in the same store, rather than *with* them, against another stores. Additionally, the current study has broadened the applicability for LAS, suggesting it to be an efficient leadership style in order to boost employees' intrinsic motivation, in the retail environment as well. Extrinsic motivation did not, however, relate to either frequency of competitions nor a perceived competitive climate.

This study has thereby cleared some uncertainties regarding motivation for employees in the retail environment. It has brought the already established SDT into a somewhat unexplored field and supported some of its applicability. Learning from these results may help retail managers and HR-departments, providing insight in how to motivate their employees intrinsically and thereby possibly improving their well-being and performance.

Work motivation is a long-time explored concept and will probably continue to generate a great amount of new research in the future. Hopefully, the current study has contributed to new questions and perspectives that may help to optimize work, finding profitable paths, both for the individual employee and organizations, especially within retail.

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